OPTICAL AMPLIFICATION APPARATUS USING RAMAN AMPLIFICATION

CROSS-REFERENCE TO RELATED APPLICATIONS

[0100] This application is a continuation of application number 10/192,528, filed July 11, 2002, now allowed, which is continuation of U.S. Patent 6,441,951 (serial no. 09/858,509, filed May 17, 2001), which is a continuation of International Application PCT/JP00/06102, filed September 7, 2000, it being further noted that priority is based upon PCT Application No. PCT/JP00/06102, filed September 7, 2000.

Now USPN 6,683,712

BACKGROUND OF THE INVENTION

1. Field of the Invention

[0101] The present invention relates to an optical amplification apparatus for amplifying signal light using Raman amplification, and in particular to an optical amplification apparatus having a function for detecting an input interruption of signal light.

2. Description of the Related Art

[0102] Recently, the development of techniques has been progressed for achieving for example an expansion of optical amplification bands, or a reduction in repeater loss in various types of optical transmission systems, through the construction of optical amplification apparatus making use of Raman amplification. For example, an optical amplification apparatus is proposed with a construction as shown in FIG. 10, where a Raman amplifier is disposed prior to for example an erbium doped optical fiber amplifier